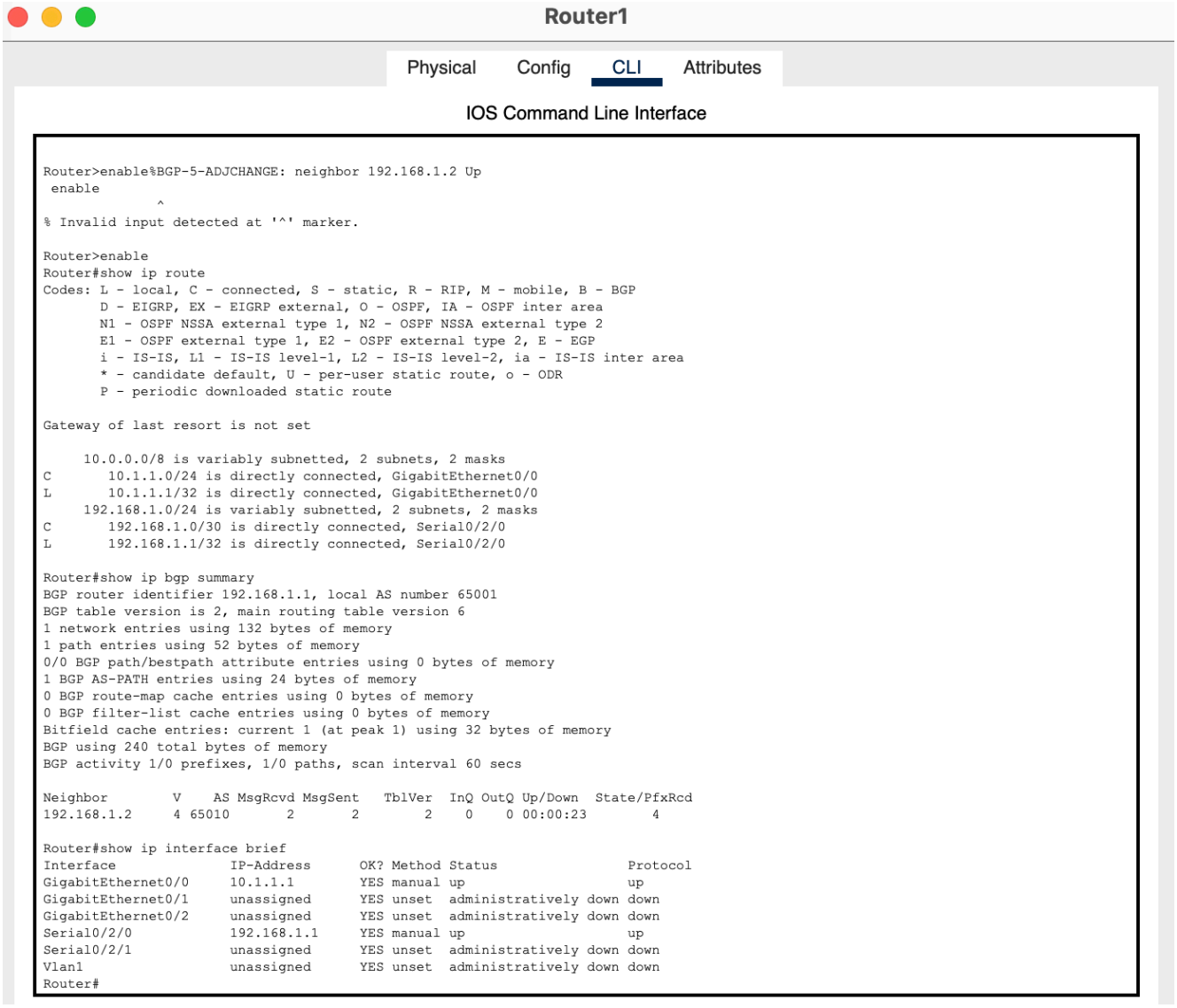
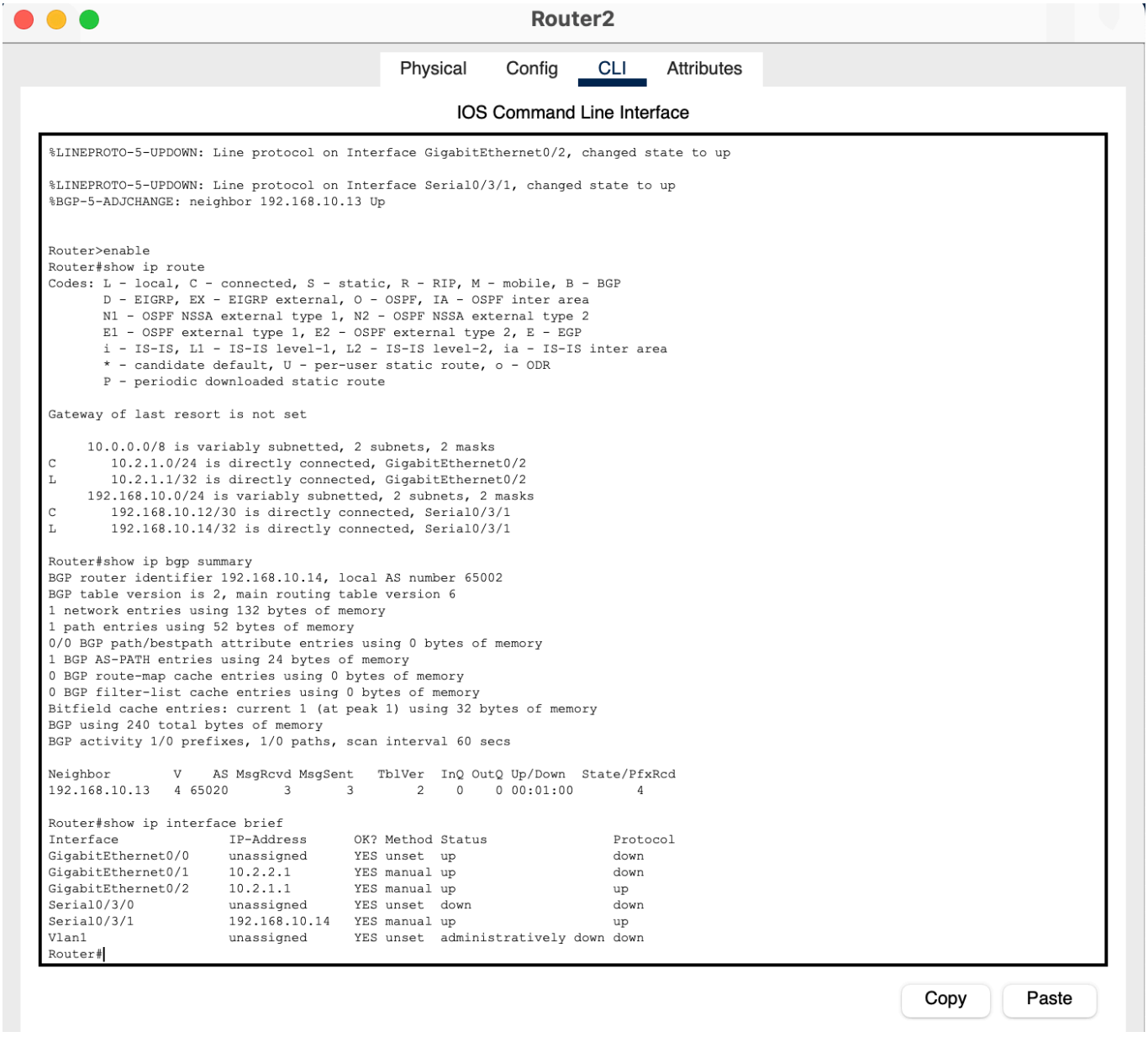
BGP and OSPF Configuration Verification

Router1



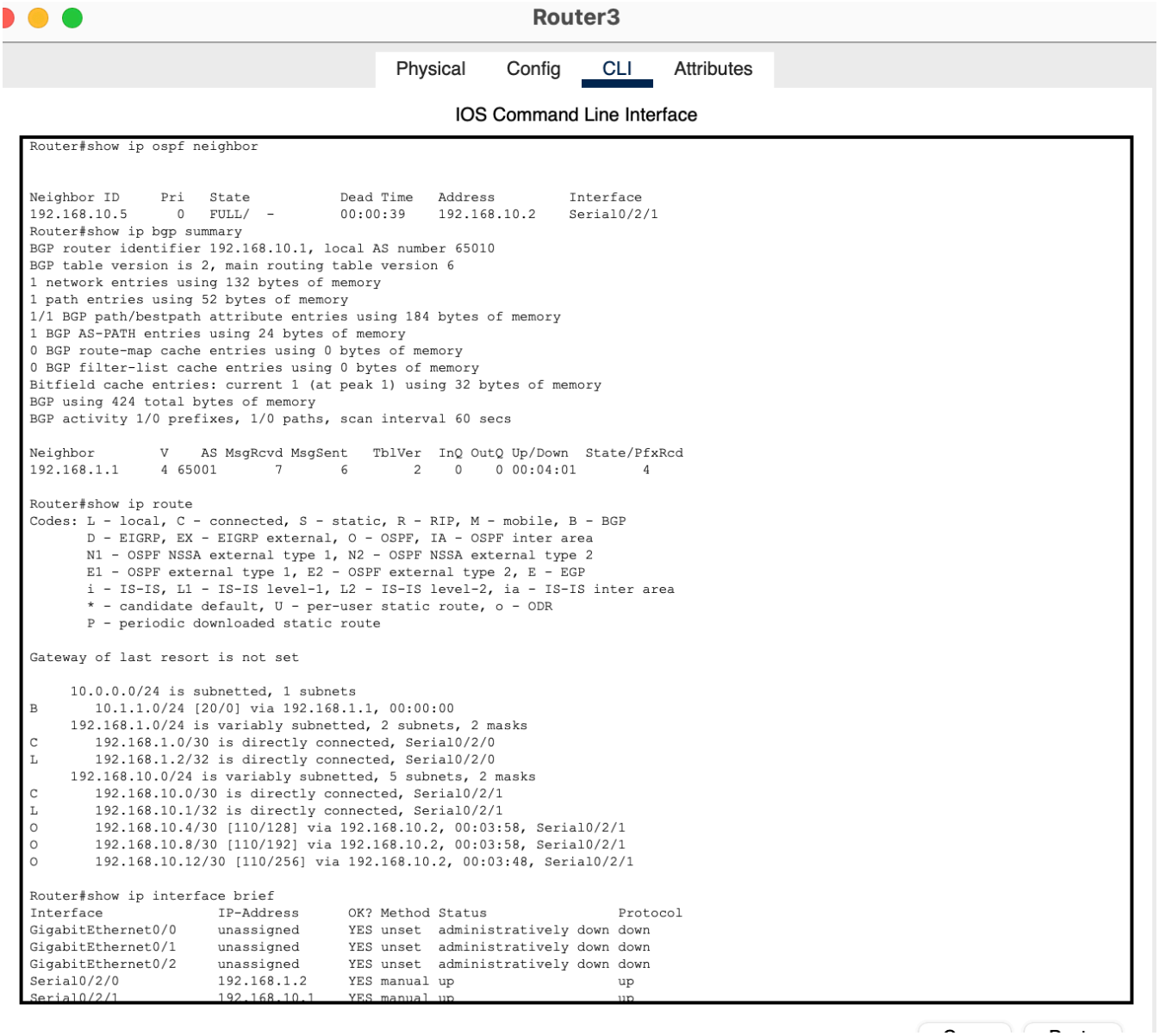
R1

Router2


Router2
Physical
Config
CLI
Attributes
IOS Command Line Interface
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/3/1, changed state to up
%BGP-5-ADJCHANGE: neighbor 192.168.10.13 Up
Router>enable
Router#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route
Gateway of last resort is not set
10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 10.2.1.0/24 is directly connected, GigabitEthernet0/2
L 10.2.1.1/32 is directly connected, GigabitEthernet0/2
192.168.10.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.10.12/30 is directly connected, Serial0/3/1
L 192.168.10.14/32 is directly connected, Serial0/3/1
Router#show ip bgp summary
BGP router identifier 192.168.10.14, local AS number 65002
BGP table version is 2, main routing table version 6
1 network entries using 132 bytes of memory
1 path entries using 52 bytes of memory
0/0 BGP path/bestpath attribute entries using 0 bytes of memory
1 BGP AS-PATH entries using 24 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
0 BGP filter-list cache entries using 0 bytes of memory
Bitfield cache entries: current 1 (at peak 1) using 32 bytes of memory
BGP using 240 total bytes of memory
BGP activity 1/0 prefixes, 1/0 paths, scan interval 60 secs
Neighbor V AS MsgRcvd MsgSent TblVer InQ OutQ Up/Down State/PfxRcd
192.168.10.13 4 65020 3 3 2 0 0 00:01:00 4
Router#show ip interface brief
Interface IP-Address OK? Method Status Protocol
GigabitEthernet0/0 unassigned YES unset up down
GigabitEthernet0/1 10.2.2.1 YES manual up down
GigabitEthernet0/2 10.2.1.1 YES manual up up
Serial0/3/0 unassigned YES unset down down
Serial0/3/1 192.168.10.14 YES manual up up
Vlan1 unassigned YES unset administratively down down
Router#
Copy
Paste

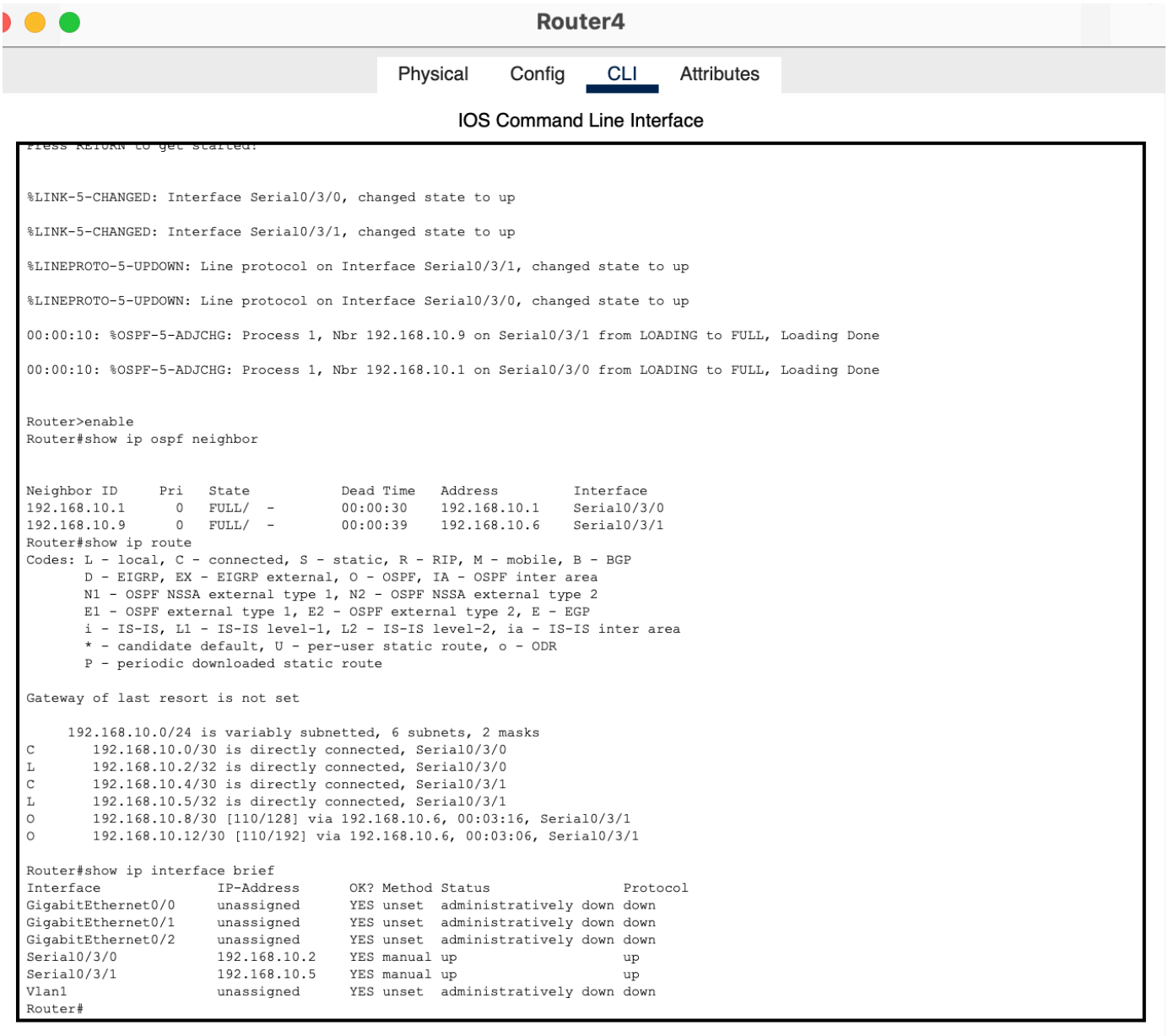
R2

Router3


Router3
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router#show ip ospf neighbor
Neighbor ID Pri State Dead Time Address Interface
192.168.10.5 0 FULL/ - 00:00:39 192.168.10.2 Serial0/2/1
Router#show ip bgp summary
BGP router identifier 192.168.10.1, local AS number 65010
BGP table version is 2, main routing table version 6
1 network entries using 132 bytes of memory
1 path entries using 52 bytes of memory
1/1 BGP path/bestpath attribute entries using 184 bytes of memory
1 BGP AS-PATH entries using 24 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
0 BGP filter-list cache entries using 0 bytes of memory
Bitfield cache entries: current 1 (at peak 1) using 32 bytes of memory
BGP using 424 total bytes of memory
BGP activity 1/0 prefixes, 1/0 paths, scan interval 60 secs
Neighbor V AS MsgRcvd MsgSent TblVer InQ OutQ Up/Down State/PfxRcd
192.168.1.1 4 65001 7 6 2 0 0 00:04:01 4
Router#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route
Gateway of last resort is not set
10.0.0.0/24 is subnetted, 1 subnets
B 10.1.1.0/24 [20/0] via 192.168.1.1, 00:00:00
192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.1.0/30 is directly connected, Serial0/2/0
L 192.168.1.2/32 is directly connected, Serial0/2/0
192.168.10.0/24 is variably subnetted, 5 subnets, 2 masks
C 192.168.10.0/30 is directly connected, Serial0/2/1
L 192.168.10.1/32 is directly connected, Serial0/2/1
O 192.168.10.4/30 [110/128] via 192.168.10.2, 00:03:58, Serial0/2/1
O 192.168.10.8/30 [110/192] via 192.168.10.2, 00:03:58, Serial0/2/1
O 192.168.10.12/30 [110/256] via 192.168.10.2, 00:03:48, Serial0/2/1
Router#show ip interface brief
Interface IP-Address OK? Method Status Protocol
GigabitEthernet0/0 unassigned YES unset administratively down down
GigabitEthernet0/1 unassigned YES unset administratively down down
GigabitEthernet0/2 unassigned YES unset administratively down down
Serial0/2/0 192.168.1.2 YES manual up up
Serial0/2/1 192.168.10.1 YES manual up up

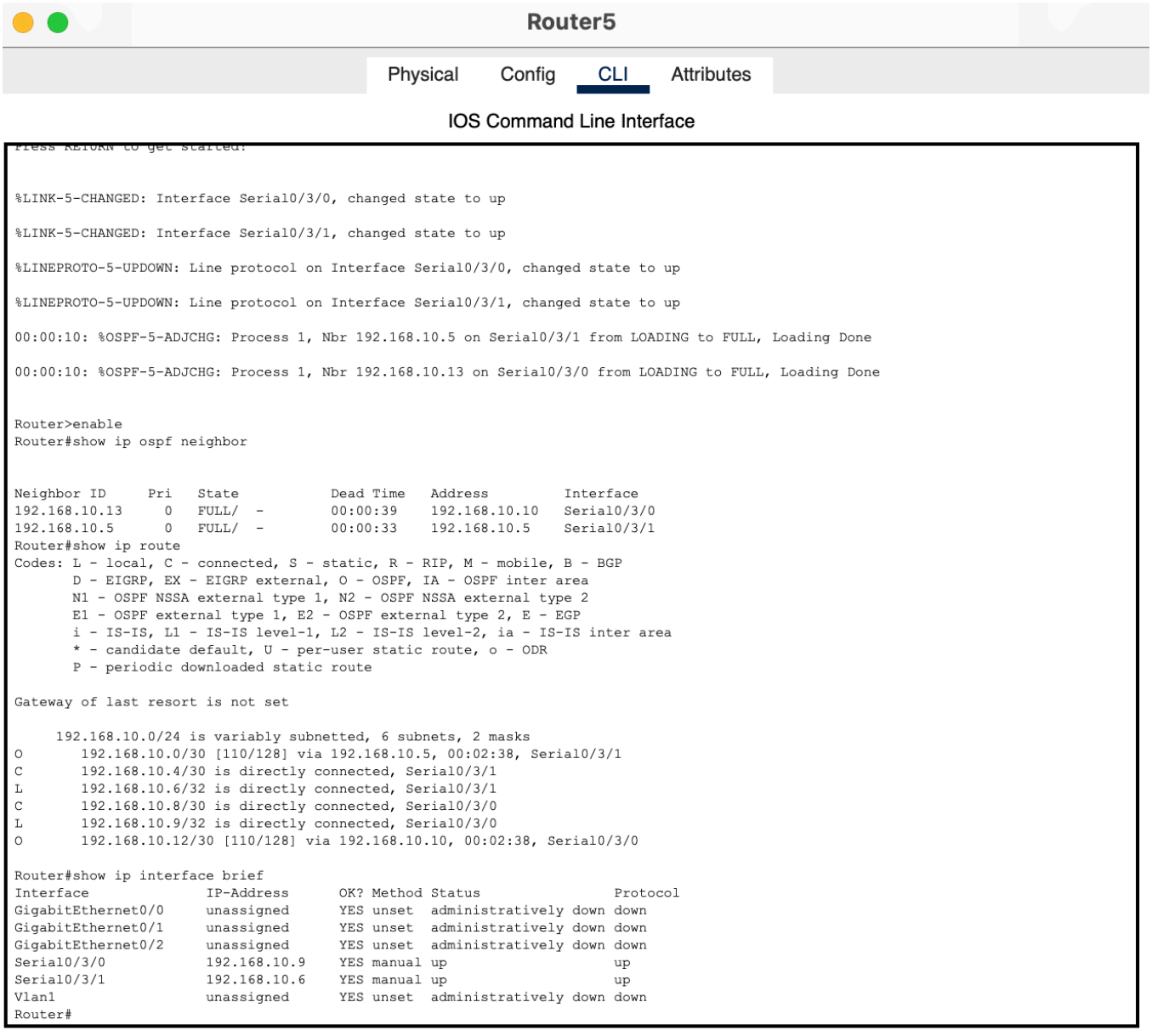
R3

Router4


Router4
Physical
Config
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started!
%LINK-5-CHANGED: Interface Serial0/3/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/3/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/3/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/3/0, changed state to up
00:00:10: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.10.9 on Serial0/3/1 from LOADING to FULL, Loading Done
00:00:10: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.10.1 on Serial0/3/0 from LOADING to FULL, Loading Done
Router>enable
Router#show ip ospf neighbor
Neighbor ID Pri State Dead Time Address Interface
192.168.10.1 0 FULL/ - 00:00:30 192.168.10.1 Serial0/3/0
192.168.10.9 0 FULL/ - 00:00:39 192.168.10.6 Serial0/3/1
Router#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route
Gateway of last resort is not set
192.168.10.0/24 is variably subnetted, 6 subnets, 2 masks
C 192.168.10.0/30 is directly connected, Serial0/3/0
L 192.168.10.2/32 is directly connected, Serial0/3/0
C 192.168.10.4/30 is directly connected, Serial0/3/1
L 192.168.10.5/32 is directly connected, Serial0/3/1
O 192.168.10.8/30 [110/128] via 192.168.10.6, 00:03:16, Serial0/3/1
O 192.168.10.12/30 [110/192] via 192.168.10.6, 00:03:06, Serial0/3/1
Router#show ip interface brief
Interface IP-Address OK? Method Status Protocol
GigabitEthernet0/0 unassigned YES unset administratively down down
GigabitEthernet0/1 unassigned YES unset administratively down down
GigabitEthernet0/2 unassigned YES unset administratively down down
Serial0/3/0 192.168.10.2 YES manual up up
Serial0/3/1 192.168.10.5 YES manual up up
Vlan1 unassigned YES unset administratively down down
Router#

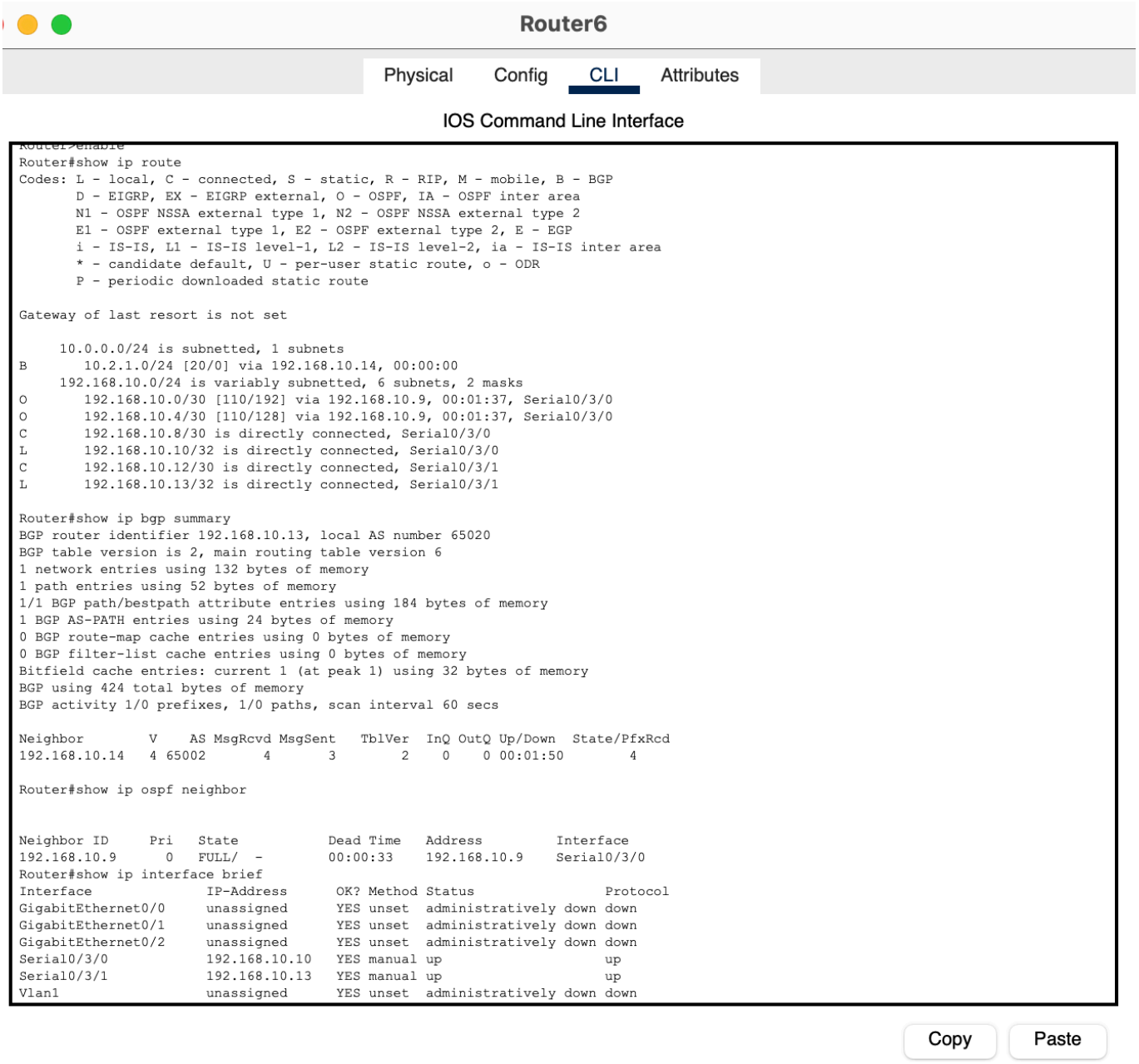
R4

Router5


Router5
Physical
Config
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started.
%LINK-5-CHANGED: Interface Serial0/3/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/3/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/3/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/3/1, changed state to up
00:00:10: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.10.5 on Serial0/3/1 from LOADING to FULL, Loading Done
00:00:10: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.10.13 on Serial0/3/0 from LOADING to FULL, Loading Done
Router>enable
Router#show ip ospf neighbor
Neighbor ID Pri State Dead Time Address Interface
192.168.10.13 0 FULL/ - 00:00:39 192.168.10.10 Serial0/3/0
192.168.10.5 0 FULL/ - 00:00:33 192.168.10.5 Serial0/3/1
Router#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route
Gateway of last resort is not set
192.168.10.0/24 is variably subnetted, 6 subnets, 2 masks
O 192.168.10.0/30 [110/128] via 192.168.10.5, 00:02:38, Serial0/3/1
C 192.168.10.4/30 is directly connected, Serial0/3/1
L 192.168.10.6/32 is directly connected, Serial0/3/1
C 192.168.10.8/30 is directly connected, Serial0/3/0
L 192.168.10.9/32 is directly connected, Serial0/3/0
O 192.168.10.12/30 [110/128] via 192.168.10.10, 00:02:38, Serial0/3/0
Router#show ip interface brief
Interface IP-Address OK? Method Status Protocol
GigabitEthernet0/0 unassigned YES unset administratively down down
GigabitEthernet0/1 unassigned YES unset administratively down down
GigabitEthernet0/2 unassigned YES unset administratively down down
Serial0/3/0 192.168.10.9 YES manual up up
Serial0/3/1 192.168.10.6 YES manual up up
Vlan1 unassigned YES unset administratively down down
Router#

R5

Router6


Router6
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router>enable
Router#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route
Gateway of last resort is not set
10.0.0.0/24 is subnetted, 1 subnets
B 10.2.1.0/24 [20/0] via 192.168.10.14, 00:00:00
192.168.10.0/24 is variably subnetted, 6 subnets, 2 masks
O 192.168.10.0/30 [110/192] via 192.168.10.9, 00:01:37, Serial0/3/0
O 192.168.10.4/30 [110/128] via 192.168.10.9, 00:01:37, Serial0/3/0
C 192.168.10.8/30 is directly connected, Serial0/3/0
L 192.168.10.10/32 is directly connected, Serial0/3/0
C 192.168.10.12/30 is directly connected, Serial0/3/1
L 192.168.10.13/32 is directly connected, Serial0/3/1
Router#show ip bgp summary
BGP router identifier 192.168.10.13, local AS number 65020
BGP table version is 2, main routing table version 6
1 network entries using 132 bytes of memory
1 path entries using 52 bytes of memory
1/1 BGP path/bestpath attribute entries using 184 bytes of memory
1 BGP AS-PATH entries using 24 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
0 BGP filter-list cache entries using 0 bytes of memory
Bitfield cache entries: current 1 (at peak 1) using 32 bytes of memory
BGP using 424 total bytes of memory
BGP activity 1/0 prefixes, 1/0 paths, scan interval 60 secs
Neighbor V AS MsgRcvd MsgSent TblVer InQ OutQ Up/Down State/PfxRcd
192.168.10.14 4 65002 4 3 2 0 0 00:01:50 4
Router#show ip ospf neighbor
Neighbor ID Pri State Dead Time Address Interface
192.168.10.9 0 FULL/ - 00:00:33 192.168.10.9 Serial0/3/0
Router#show ip interface brief
Interface IP-Address OK? Method Status Protocol
GigabitEthernet0/0 unassigned YES unset administratively down down
GigabitEthernet0/1 unassigned YES unset administratively down down
GigabitEthernet0/2 unassigned YES unset administratively down down
Serial0/3/0 192.168.10.10 YES manual up up
Serial0/3/1 192.168.10.13 YES manual up up
Vlan1 unassigned YES unset administratively down down
Copy
Paste

R6